ABSTRACT OF THE INVENTION

Disclosed is a mechanism for systematically invoking executable features of a software application via its graphical user interface. Also disclosed is a mechanism for

5   generating a map that characterizes operational states of an application as it executes. An application driver selects an action to be performed by the application according to a deterministic mode such as depth-first mode or breadth-first mode. In the depth-first mode of deterministic operation, an action associated with a particular element is explored as deeply as possible, while breadth-first mode explores the application as

10 widely as possible. For each executable feature invoked within the software application, the states encountered during execution are stored within the application map for subsequent retrieval and analysis.